# Rules for Exposure Control Areas

WAC 296-849-130

## Section Contents



**YOUR RESPONSIBILITY:**

**To protect employees from exposure to benzene by using feasible exposure controls and appropriate respirators**

**IMPORTANT:**

- These sections apply when existing or potential employee exposure monitoring results are above either of the following permissible exposure limits (PELs):
  - The 8-hour time-weighted average ($TWA_8$) of 1 part per million (ppm)

    **or**
  - The 15-minute short-term exposure limit (STEL) of 5 ppm.

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## Rule

### WAC 296-849-13005

### Exposure control plan

**Exemption:**

- This section doesn't apply to the cleaning and repair of barges and tankers that contained benzene.

### You must

- Establish and implement a written exposure control plan for exposure control areas that include a schedule for developing and implementing feasible exposure controls to reduce benzene exposure to, or below, the PELs.

**Reference:**

➢ To see examples of exposure controls, go to Respiratory Hazards, Chapter 296-841 WAC, and find Table 1 in Control employee exposure, WAC 296-841-20010.

**Note:**

➢ Respirators and other personal protective equipment (PPE) help protect employees from exposures, but are **not** substitutes for feasible exposure controls.

### You must

- Review and update your exposure control plan as needed, based on the most recent exposure evaluation results
- Provide a copy of your exposure control plan to affected employees and their designated representatives when they ask to review or copy it.

## WAC 296-849-13020

## Exposure controls

### IMPORTANT:

- Respirators and other personal protective equipment (PPE) do **not** substitute for feasible exposure controls.

### You must

- Use feasible exposure controls to reduce exposures, as specified in Table 6.

**Reference:**

➢ To see examples of exposure controls, go to Respiratory Hazards, Chapter 296-841 WAC, and find Table 1 in Control employee exposures, WAC 296-841-20010.

**-Continued-**

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## Rule

### WAC 296-849-13020 (Continued)

**Table 6**
**Exposure Control Requirements**

| If | Then you must use feasible controls to |
|---|---|
| You have operations where employees clean and repair barges or tankers which have contained benzene | Keep all employee exposure concentrations below 10 parts per million (ppm). |
| You can document that benzene is used for less than 30 days a year in the workplace | Reduce 8-hour employee exposure monitoring results to a time-weighted average of 10 ppm or less.<br><br>**Note:**<br>If employee exposure monitoring results are between 1 and 10 ppm, you are permitted to use respirators or a combination of respirators and feasible controls to protect employees. |
| Employees are exposed to benzene above a PEL for at least 30 days a year | Reduce 8-hour employee exposure concentrations to the $TWA_8$ of 1 ppm or less<br>**and**<br>Reduce 15-minute employee exposure concentrations to the STEL of 5 ppm or less. |

## WAC 296-849-13045

## Respirators

### IMPORTANT:

- These requirements are in addition to the requirements found in other chapters:
  - Respiratory Hazards, Chapter 296-841 WAC
  - Respirators, Chapter 296-842 WAC

### You must

- Provide respirators and require that employees use them in circumstances where exposure is above either permissible exposure limit (PEL) for benzene, including any of the following circumstances:
  - Employees are in an exposure control area
  - Feasible exposure controls are being put in place
  - Where you determine that exposure controls aren't feasible
  - Feasible exposure controls don't reduce exposures to, or below, a PEL.
  - Emergencies
- Meet these requirements to protect employees from benzene exposure above a PEL:
  - Limit selection of escape respirators to either:
    - A full-facepiece organic vapor gas mask
    - A full-facepiece self-contained breathing apparatus (SCBA)
    - A hood-style SCBA that operates in positive-pressure mode.

**-Continued-**

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# Rule

## WAC 296-849-13045 (Continued)

- Make sure respirator cartridges or canisters are replaced at the beginning of each work shift, or sooner if their service life has expired
- Make sure canisters on gas masks and powered air-purifying respirators (PAPRs) have a minimum service life of 4 hours when tested under these conditions:
  - A benzene concentration of 150 ppm
  - A temperature of 25°C
  - A relative humidity of 85%
  - A flow rate of one of the following:
    - 64 liters per minute (lpm) for nonpowered air-purifying respirators
    - 115 lpm for tight-fitting PAPRs
    - 170 lpm for loose-fitting PAPRs
- Provide an employee a respirator with low breathing resistance, such as a PAPR or an air-line respirator when the:
  - Employee can't use a negative-pressure respirator

    **and**
  - A licensed health care professional's (LHCP's) written opinion allows this type of respirator.